UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/728,084 | 12/03/2003 | Pentti Juhani Eromaki | 4447-67437-01 | 7665 |

24197 7590 05/27/2009

KLARQUIST SPARKMAN, LLP
121 SW SALMON STREET
SUITE 1600
PORTLAND, OR 97204

| EXAMINER | |
|---|---|
| MAKI, STEVEN D | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1791 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 05/27/2009 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/728,084 | EROMAKI, PENTTI JUHANI | |
| | Examiner | Art Unit | |
| | Steven D. Maki | 1791 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *02 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2) Claims 1-37 and 40-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 16, the scope and meaning of "said at least one anti-slip stud is drivable into the stud capturing space between the jaw fingers and assumes a predetermined orientation for installation in a stud recess" is ambiguous. It is unclear if the use of the word "assumes" requires a change in orientation. It is unclear if the use of the word "assumes" requires the jaw fingers to have the capability of moving (e.g. rotating) the stud in the stud capturing space to the predetermined orientation. Alternatively, it is unclear if the above noted language fails to require the jaw fingers to have the capability of moving (e.g. rotating) the stud in the stud capturing space to the predetermined orientation so that claims 1 and 16 read on the stud having the "predetermined orientation" before entering the stud capturing space and after installation in the stud recess.

3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-37 and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1 and 16, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the **new matter**) is the subject matter of "said at least one anti-slip stud is drivable into the stud capturing space between the jaw fingers and assumes a predetermined orientation for installation in a stud recess". The term "assumes" in this amendment filed 3-2-09 replaces the phrase "is rotated" in the previous amendment filed 6-30-08. Both "assumes" and "is rotated" appear to require change in orientation of the stud. In particular, the use of the word "assumes" appears to require the jaw fingers to have the capability of moving (e.g. rotating) the stud in the stud capturing space to the predetermined orientation. The stud assumes the predetermined orientation in the stud capturing space because the stud moves (e.g. rotates) to the predetermined orientation in the stud capturing space. There is no support for this subject matter in the original disclosure. In other words, the subject matter of "said at least one anti-slip stud is drivable into the stud capturing space between the jaw fingers and assumes a predetermined orientation for installation in a stud recess" is not reasonably conveyed by the original disclosure because the original disclosure fails reasonably convey orienting a stud by rotating the stud relative to the jaw fingers as the stud is driven through the stud capturing space. The original disclosure fails to support

orienting a stud by rotating the stud relative to the jaw fingers as the stud is driven through the stud capturing space for the reasons given in paragraph 5 of the last office action dated 10-2-08 (paragraph 5 of the last office action dated 10-2-08 is incorporated herein by reference).

5) Claims 1-37 and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claims 1 and 16, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention (i.e. **the non-enabled subject matter**) is the subject matter of the subject matter of "said at least one anti-slip stud is drivable into the stud capturing space between the jaw fingers and assumes a predetermined orientation for installation in a stud recess". The term "assumes" in this amendment filed 3-2-09 replaces the phrase "is rotated" in the previous amendment filed 6-30-08. Both "assumes" and "is rotated" appear to require change in orientation of the stud. In particular, the use of the word "assumes" appears to require the jaw fingers to have the capability of moving (e.g. rotating) the stud in the stud capturing space to the predetermined orientation. The stud assumes the predetermined orientation in the stud capturing space because the stud moves (e.g. rotates) to the predetermined orientation in the stud capturing space. There is no

support for this subject matter in the original disclosure. In other words, the subject matter of "said at least one anti-slip stud is drivable into the stud capturing space between the jaw fingers and assumes a predetermined orientation for installation in a stud recess" is not enabled by the original disclosure because the original disclosure fails to enable orienting a stud by rotating the stud relative to the jaw fingers as the stud is driven through the stud capturing space. The original disclosure fails to enable orienting a stud by rotating the stud relative to the jaw fingers as the stud is driven through the stud capturing space for the reasons given in paragraph 6 of the last office action dated 10-2-08 (paragraph 6 of the last office action dated 10-2-08 is incorporated herein by reference).

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7) **Claims 1-6, 8-22 and 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson (US 3,385,742) in view of Ostrovskis (US 2002/0050312) and Russia (RU 2,152,318).**

Pettersson discloses a method for making a studded tire comprising: providing a motor vehicle tire 10 (pneumatic tire) having a tread; forming holes 11 in the tread; providing studs wherein each stud comprises a bottom flange 13, a neck 15, a bowl 15 and a tip 16 (figure 1); providing an installation tool having "a number of fingers" (col. 4 lines 16-17) such as three fingers 17, 18, 19; and using the installation tool to install the

studs in the holes wherein the fingers are inserted in the hole, the stud is moved through the bore 20 of a sleeve 25 using plunger 22 such that the stud is pressed against the shoulders of the fingers to force the fingers radially outward when the stud flange 13 is sliding along the fingers into its bottom position in the hole between the end portions of the fingers; maintaining the plunger in contact with the stud and simultaneously withdrawing the fingers from the hole so that the plunger prevents withdrawal of the stud from the hole. The movement of plunger 22 is obtained using an "axial force". The fingers are "charged by a radial force against each other" because the fingers are forced open by the stud pressing against the fingers. The claims fail to require a larger radial force than that used in Pettersson. More specifically, the claims fail to require a larger radial force than that exerted by elastic ring 28a. As shown in figures 3-5, the fingers have narrowing tip portions. Pettersson states "... positioning a spike [stud] between the fingers and within the hole. Finally, the fingers are withdrawn from the hole, permitting the wall of the hole to contract to its original shape and thereby firmly grip the spike to safely anchor the same in a correct position" (col. 1 lines 56-60). Hence, Pettersson teaches positioning the stud using the fingers and maintaining the position of the stud using material of the tread. Pettersson substantially discloses (1) the claimed combination of tire and studs and tool and (2) the claimed method of installing studs. Pettersson does not recite the stud having a bottom flange with *the claimed shape*.

Ostrovskis discloses a stud 1 for a motor vehicle tire comprising a bottom flange 2, a neck 3, a bowl 4 and a tip 5. See figure 1. The cross-sectional shape of the root

(bottom flange 2) is out of round. The out of round shape may for example be oval or rounded rectangle. The cross-sectional shape of the upper part (tip 5, bowl 4) is also out of round. The longitudinal axis of the out or round root (flange) and the longitudinal axis of the upper part enclose an angle of for example 65-115 degrees. Ostrovskis teaches that the out of round bottom flange of the stud can be oriented in the tread such that tilting of the stud in the rubber under load conditions is reduced so as to reduce heating and aging of the tread rubber. Ostrovskis also discloses orienting the out of round tip in the tread so as to shorten braking distance and reduce traction. For installation of the stud in a tread, Ostrovskis teaches guiding the stud to the tread using a pipe (tube) having a cross section corresponding to the cross section of the stud so that the stud can be seated in the tread at the proper angular position.

Russia discloses a tire studding device comprising a guiding tube 13, charging tube 11, lips 14 (fingers) for widening a hole in the tread of the tire, a pusher 16 with drive to insert an anti-skid stud into the widened hole and a drive starter wherein the charging tube 11 is provided with guide members for orientation of the antiskid stud. The section profile of the tube 11 meets the section profile of the anti-skid stud. See abstract and figures and translation provided by applicant. The stud comprises a tip 5, body 1, and bottom flange 2. See figures 11 and 12. The stud may have a generally triangular cross-sectional shape (figure 11) or a generally rectangular cross sectional shape (figure 3). When installing a stud having a generally triangular cross section, Russia shows using three pushers 16 - one pusher for each side of the bottom flange. See figure 19.

As to claims 1, 16, 38 and 39, it would have been obvious to one of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tire tread since (1) Ostrovskis, also disclosing a stud for a tire tread having a bottom flange, neck, top bowl and tip, suggests using **out of round cross-sectional shape (e.g. oval, rounded rectangle)** for the tip and bottom flange of a stud *to improve braking and traction of the tire and to prevent tilting of the stud to reduce heating and aging of the tread rubber* and (2) Russia teaches inserting **"out of round" studs** into premade holes in a tire tread *using an apparatus similar to that of Pettersson*. One of ordinary skill in the art would have had a reasonable expectation of success using Pettersson's stud installation tool to install out of round studs into premade holes. Pettersson and Ostrovskis both guide a stud through a tube toward the tread. Pettersson and Russia both guide a stud through a tube toward a tread with Russia additionally teaching installing out of round studs into premade holes using a stud installation tool similar to that of Pettersson. Ostrovskis and Russia motivate one of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tread. Ostrovskis for example motivates one of ordinary skill in the art to use non-round studs to improve braking and traction of the tire and to prevent tilting of the stud to reduce heating and aging of tread rubber.

Applicant argues that Ostrovskis' and Russia's devices are adapted to install studs with non-round flanges yet both devices employ tube technology that is substantially different from that of Pettersson. This argument is not persuasive. Pettersson, Ostrovskis and Russia use the same structure of tube to guide a stud to a

recess in a tread. In Pettersson, the "tube" comprises sleeve 25. In Ostrovskis, the "tube" comprises pipe 30. In Russia, the "tube" comprises charging tube 11. Furthermore, Pettersson, Ostrovskis and Russia use a "tube" in which the shape of the interior of the "tube" is the same as the shape of the flange of the stud. In Pettersson, a round shape is used for both the interior of sleeve 25 and the flange of the stud 12. In Ostrovskis, an oval shape is used for both the interior of pipe 30 and the flange of stud 1. In Russia, a generally triangular shape is used for both the shape of the interior of guiding tube 11 and the shape of the stud. The same structure ("tube") having the same feature ("interior shape of tube corresponding to shape of the stud") and having the same primary function ("guiding the stud to a recess in a tread") is used in all three of Pettersson, Ostrovskis and Russia. Ostrovskis and Russia add to Pettersson by teaching that the "tube" has an additional function (orienting the stud) when the interior of the tube has the same non-round shape as the non-round shape of the flange of the stud. When using non-round studs in Pettersson's device, one of ordinary skill in the art is instructed by Ostrovskis and Russia to provide the interior of sleeve 25 ("tube") of Pettersson's installation tool with the same shape as the flange of the non-round stud. The expected and predicted result from the applied prior art of guiding a non-round stud through a non-round interior of sleeve 25 is guiding the non round stud in the proper orientation to the recess in the tread. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR International Co. v. Teleflex Inc. 127 S.Ct. 1727, 82 USPQ2d 1385 (Supreme Court, April 30, 2007).

Applicant argues and examiner agrees that both Ostrovskis and Russia utilize charging tubes that have a cross-sectional profile that corresponds to the shape of the non-round stud flanges to achieve the proper orientation of the studs as they are installed in the tire. Examiner adds that this disclosure in Ostrovskis and Russia provides clear guidance to one of ordinary skill in the art that when using Pettersson's stud installation tool to install non-round studs, the interior of sleeve 25 ("charging tube") should be provided with a cross-sectional profile that corresponds to the shape of the non-round stud - only the expected and predicted results (guiding stud in proper orientation) being obtained.

Applicant argues that conventional wisdom, including the teachings of Ostrovskis and Russia, teaches against using the type of installation tool disclosed in Pettersson when installing studs having non-round flanges. This argument is not persuasive since Ostrovskis and Russia, like Pettersson, teach toward using a "tube" to guide a stud to a recess in a tread. Furthermore, Ostrovskis and Russia teach toward shaping the interior of the sleeve 25 ("tube") of Pettersson's installation tool to have a cross-sectional profile that corresponds to the shape of the non-round stud - only the expected and predicted results (guiding stud in proper orientation) being obtained.

Applicant argues that Pettersson discloses studs having round flanges and an installation tool that has a charging tube having a circular cross sectional profile, which is exactly the type of installation tool that Ostrovskis and Russia teach to avoid. This argument is not persuasive. First: This argument is not commensurate in scope with the claims and is therefore not persuasive since none of the claims require a charging

tube having a circular cross sectional profile. Second: Neither Ostrovskis nor Russia teach avoiding an installation tool, which like that in Pettersson, uses a plunger to install studs in recesses of a tire tread. Third: Ostrovskis and Russia disclose the solution (shape of interior of tube corresponding to shape of non round stud) to the problem of achieving proper orientation of a non round stud. Informed of this solution, Ostrovskis and Russia provide ample suggestion to provide the interior of sleeve 25 ("charging tube") with a cross-sectional profile that corresponds to the shape of the non-round stud so that the tool can install non round studs in the proper orientation.

Applicant argues that the stated motivation to combine the references (improved tire performance) has nothing to do with the installation process disclosed by Pettersson. In fact, both Ostrovskis and Russia state that it is essential to use a non round charging tube (which is not taught or suggested by Pettersson) in order to properly install non-round studs. This argument is off point. First: Installation of studs in a tire as disclosed by Ostrovskis and Russia has everything to do with the installation process disclosed by Pettersson because Pettersson's process installs studs in a tire. Second: Nothing in Pettersson, Ostrovskis and Russia teach using a circular cross section for the interior of a tube when using non round studs. In contrast, Pettersson, Ostrovskis and Russia all teach using a shape of the interior of a "tube" corresponding to the shape of the stud to be installed. Third: Ostrovskis and Russia motivate one of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tread to obtain, for example, improved braking a traction of the tire and to prevent tilting of the stud to reduce heating and aging of tread rubber.

Contrary to applicant's argument, this combination fails to require continued use of a "circular" cross section for the bore of sleeve 25 ("tube"). In contrast, Ostrovskis and Russia provide ample suggestion to provide the bore of sleeve 25 ("tube") with a shape corresponding to the shape of the non round stud.

As to claim 1: With respect to the number of first side portions and second side portions, the out of round cross-sectional shape (e.g. oval stud) suggested by Ostrovskis has two first side portions at a short distance from the stud center and two second side portions at a greater distance from the stud center. Alternatively, the out of round cross-sectional shape (e.g. generally rectangular stud) suggested by Russia has two first side portions at a short distance from the stud center and two second side portions at a greater distance from the stud center. Furthermore, it would have been obvious to one of ordinary skill in the art to use four fingers in Pettersson's stud installation tool in view of (1) Pettersson's teaching to use **"a number of fingers"** such as "three radially movable jaw fingers 17, 18, 19" in order to expand the wall of the hole into which the stud is inserted and optionally (2) Russia's suggestion to associate a pusher 16 / lip 14 for *each side* of an out of round stud (see figures 15-19). With respect to the fingers being in contact with at least two first side portions, Pettersson teaches pressing the bottom flange of the stud against the fingers so that the fingers expand. The use of four fingers instead of three fingers is amply suggested by Pettersson's teaching to use a number of fingers such as three. Pettersson is not limited to using only three fingers. One of ordinary skill in the art would readily appreciate from Pettersson's disclosure to use fingers to expand the hole for the stud

that the use of more than three fingers would facilitate expansion of the hole for the stud. The subject matter of the number of jaw fingers being equal to twice the number of second side portions of the stud and two jaw fingers being in contact with two first side portions of the stud is suggested by (A) Pettersson's teaching to contact the bottom flange of a stud with a number of fingers and (B) the out of round cross-sectional shaped bottom flange of the stud suggested by Ostrovskis and/or Russia. This is especially true in view of the teaching in Russia to associate a pusher 16 / lip 14 for *each side* of an out of round stud as suggested by figures 15-19.

As to claim 16: With respect to the number of first side portions and edge portions, the out of round cross-sectional shape (e.g. rounded rectangle) suggested by Ostrovskis has four side portions at a short distance from the stud center and four edge portions (rounded corners) at a greater distance from the stud center. Alternatively, the out of round cross-sectional shape (e.g. generally triangular) suggested by Ostrovskis has three first side portions at a short distance from the stud center and three edge portions (corners) at a greater distance from the stud center. It would have been obvious to one of ordinary skill in the art to use a number of fingers in Pettersson's stud installation tool equal to the number of edge portions in view of (1) Pettersson's teaching to use **"a number of fingers"** such as "three radially movable jaw fingers 17, 18, 19" in order to expand the wall of the hole into which the stud is inserted and (2) Russia's suggestion to use three pushers 16 / lips 14 for a generally triangular stud having three sides and three edge portions - i.e. associate a pusher 16 / lip 14 for each side of an out of round stud (see figures 15-19). With respect to the fingers being in contact with at

least two side portions, Pettersson teaches pressing the bottom flange of the stud against the fingers so that the fingers expand.

As to claims 38 and 39: With respect to oval or polygonal bottom flange, note the suggestion from Ostrovskis and Russia to use an out of round cross sectional shape; it being noted that Ostrovskis teaches using an out of round shape with straight sides (rounded rectangle) as an alternative to an out of round shape with only curved sides (oval). Although no longer clearly claimed: As to claim 38, it would have been obvious to one of ordinary skill in the art to **turn** Pettersson's stud installation tool such that the stud attains the second predetermined stud orientation since (1) Pettersson teaches moving the stud through the *guide bore* of a sleeve 25 and using the fingers to correctly position the stud and (2) Ostrovskis and Russia suggest turning a *guide tube* through which out of round studs are moved so that the out of round studs can be disposed in the tread of a tire at a desired orientation. The hard tip in the stud of each of Pettersson, Ostrovskis and Russia is in a constant position with respect to the bottom flange. As to using "cermet" for the hard tip, it would have been obvious to use cermet (e.g. sintered carbide) for the hard tip of the stud as claimed since it is taken as well known / conventional in the tire stud art to use "cermet" (e.g. carbide) for the tip of a tire stud (the cermet material secured in the stud by extending the cermet material a desired length through the body of the stud) so that the remainder of the tire stud can be made of a different material. The claimed non round shape of the tip is suggested by Ostrovskis and Russia. As to claim 39, it would have been obvious to one of ordinary skill in the art to use Pettersson's stud installation tool to **install two types** of studs as

claimed in view of Ostrovskis's teaching that different types of studs may be installed in the tire to obtain optimal force absorption in both straight ahead driving and curved travel to the left or the right. Ostroviskis and Russia suggests turning the tube having a guide bore to orient an out of round stud. Also, none of the claims requires orientation of the studs using jaw fingers without the need for a guide bore or injection pipe. The fingers in Pettersson orient the stud since Pettersson teaches sliding the stud along the fingers to the correct position.

With respect to the subject matter of "assumes" which corresponds to "the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space", the following comments are made: The tips of Pettersson's fingers define a "stud capturing space", Ostrovskis (claim 12) teaches allowing "slight play" during guiding of the spikes (studs) through the pipe and figure 18 of Russia illustrates some "space" being provided between the guide tube 11 and the bottom flange of the stud. The slight play described by Ostrovskis and the slight space between the tube 11 and bottom flange 2 of the stud shown by Russia **suggest configuring the bore of sleeve 25 of Petterson to permit such slight play when using non round studs**. The first / initial orientation reads on the stud having a slightly different orientation with respect to the bore. Since Pettersson's fingers, which are

expanded by the studs, have a fixed orientation, Pettersson's fingers are capable of at least slightly rotating a non-round stud. In other words, the capability of assuming / rotating reads on the structure of (1) a guide pipe / tube which allows slight play between the interior surface of the guide pipe / tube as disclosed by Ostrovskis and Russia, (2) the fixed orientation of the fingers of Pettersson and (3) the capability of studs to contact and expand Pettersson's fingers. Finally, it is noted that each of "assumes" and "rotated" is interpreted as reading on merely partially rotating at any angle the stud instead of rotating the stud 360 degrees.

As to claim 2 (four fingers), see comments on claim 1.

As to claims 3 and 4, Ostrovskis suggests an oval shaped bottom flange.

As to claim 5, it would have been obvious to use hard cermet (e.g. sintered carbide) for the tip of the stud as claimed since it is taken as well known / conventional in the tire stud art to use "cermet" (e.g. carbide) for the tip of a tire stud (the cermet material secured in the stud by extending the cermet material a desired length through the body of the stud) so that the remainder of the tire stud can be made of a different material. The claimed non round shape of the tip is suggested by Ostrovskis and/or Russia.

As to claim 6, Ostrovskis suggests orienting a non-round tip at an angle to the non-round flange.

As to claim 8, Pettersson suggests a circular premade hole. Russia also suggests using a premade hole.

As to claims 9-14 and 40, the claimed fingers read on Pettersson's fingers.

As to claim 15, see shape of bottom surface of the bottom flange in figures 1, 3, 4 of Pettersson. In any event: it would have been obvious to provide the bottom flange of the stud with a bevel as claimed since it is taken as well known / conventional per se in the tire stud art to provide the bottom flange of a tire stud with a bevel in order to facilitate insertion.

As to claims 17-22, note the non-round cross-sectional shape for the bottom flange and the non-round cross-sectional shape for the tip suggested by Ostrovskis and/or Russia. As to claim 21, note comments on claim 5.

As to claim 30, Pettersson suggests a circular premade hole. Russia also suggests using a premade hole.

As to claims 31-36 and 41, the claimed fingers read on Pettersson's fingers.

As to claim 37, see shape of bottom surface of bottom flange in figures 1, 3, 4 of Pettersson. In any event: it would have been obvious to provide the flange of the stud with a bevel as claimed since it is taken as well known / conventional per se in the tire stud art to provide the bottom flange of the tire stud with a bevel in order to facilitate insertion.

8) **Claims 7-8 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of Ostrovskis and Russia as applied above and further in view of Eromaki (US 6374886).**

As to claims 7-8 and 29-30, it would have been obvious to one of ordinary skill in the art to provide the premade hole with a bottom expansion / at least partly circular expansion as claimed in view of the suggestion from Eromaki, also directed to the tire

stud art, to provide an at least partly circular premade hole in which a non-round stud is inserted with a bottom expansion.

9) **Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of Ostrovskis and Russia as applied above and further in view of Finland 9/65 or Japan 407 (JP 56-146407).**

It would have been obvious to one of ordinary skill in the art to provide the tire stud with the claimed features as set forth in claims 23-28 in view of (1) the suggestion from Ostrovskis and Russia to use a non-round shape for the tip of the tire stud and (2) the specific non-round shape for the upper portion of a tire stud shown by Finland 9/65 (figure 2) or Japan 407 (figure 5).

Remarks

10) Applicant's arguments filed 3-2-09 have been fully considered but they are not persuasive. Applicant's arguments are addressed above.

11) No claim is allowed.

12) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
May 25, 2009